

Kingbright

3.0x2.0mm RIGHT ANGLE SMD LED

PRELIMINARY SPEC



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: APBDA3020PBACGKC

Blue
Green

Features

- 3.0mmx2.0mm SMT LED, 2.8mm THICKNESS.
- LOW POWER CONSUMPTION.
- VARIOUS COLORS AND LENS TYPES AVAILABLE.
- IDEAL FOR BACK LIGHT AND INDICATOR
- PACKAGE : 2000PCS / REEL.
- WHEN SOLDERED IN THE SIDEVIEW CONFIGURATION, THE MAXIMUM SHEAR TOLERANCE OF THE EPOXY LENS IS 300G.
- MOISTURE SENSITIVITY LEVEL : LEVEL 3.
- RoHS COMPLIANT.

Description

The Blue source color devices are made with InGaN on SiC Light Emitting Diode.

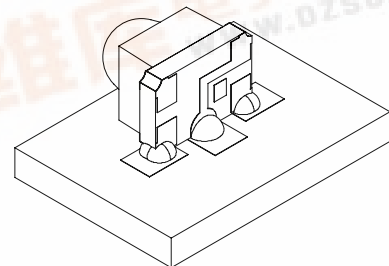
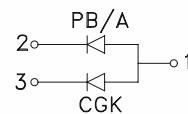
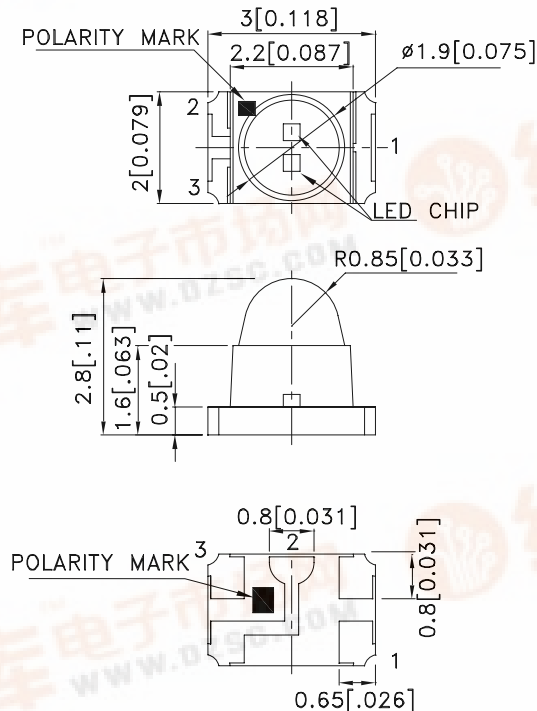
The Green source color devices are made with InGaAlP on GaAs substrate Light Emitting Diode.

Static electricity and surge damage the LEDs.

It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.

All devices, equipment and machinery must be electrically grounded.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.2 (0.008)$ unless otherwise noted.
3. Specifications are subject to change without notice.
4. The device has a single mounting surface. The device must be mounted according to the specifications.



Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
APBDA3020PBACGKC	Blue (InGaN)	WATER CLEAR	110	220	15°
	Green (InGaAlP)		180	320	

Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. Luminous intensity/ luminous Flux: +/-15%.

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Blue Green	468 574		nm	IF=20mA
λD [1]	Dominant Wavelength	Blue Green	470 570		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	Blue Green	21 20		nm	IF=20mA
C	Capacitance	Blue Green	100 15		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	Blue Green	3.2 2.1	4 2.5	V	IF=20mA
IR	Reverse Current	Blue Green		10 10	uA	VR = 5V

Notes:

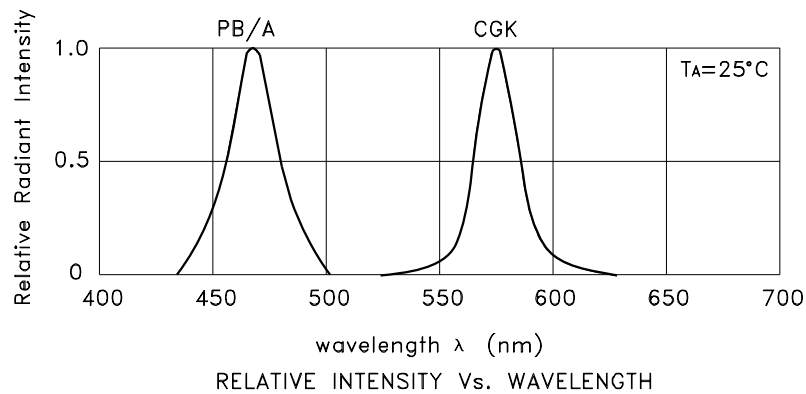
- 1.Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

Absolute Maximum Ratings at TA=25°C

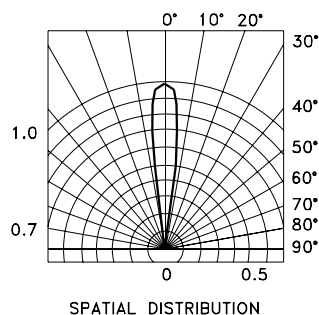
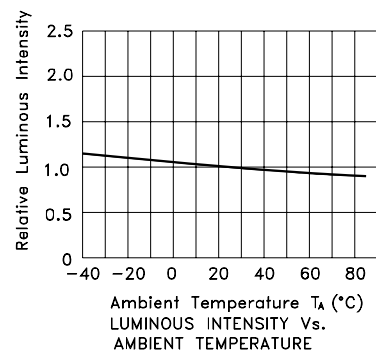
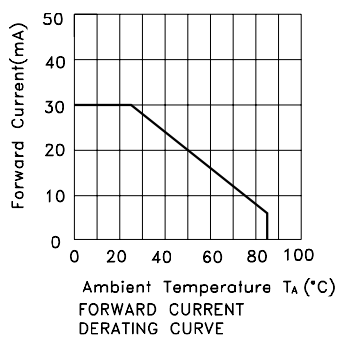
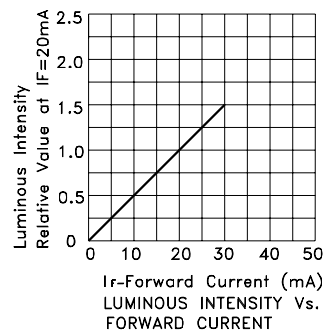
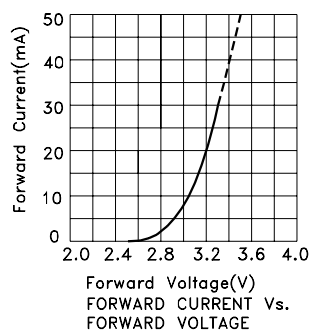
Parameter	Blue	Green	Units
Power dissipation	120	75	mW
DC Forward Current	30	30	mA
Peak Forward Current [1]	100	150	mA
Reverse Voltage	5		V
Operating Temperature	-40°C To +85°C		
Storage Temperature	-40°C To +85°C		

Note:

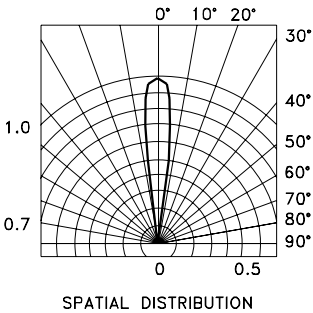
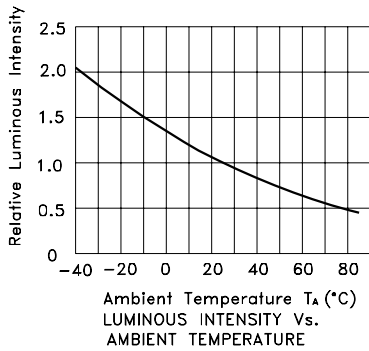
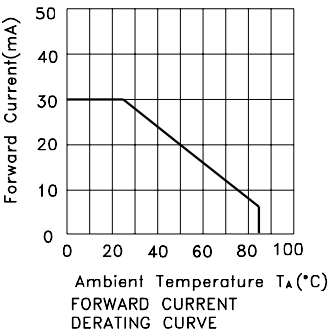
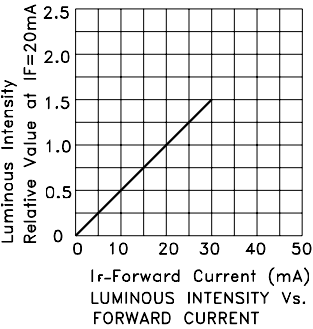
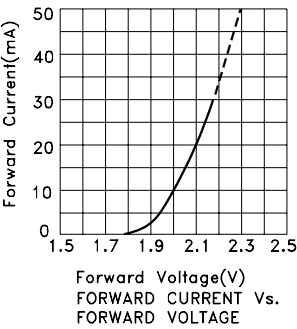
1. 1/10 Duty Cycle, 0.1ms Pulse Width.



APBDA3020PBACGKC
Blue

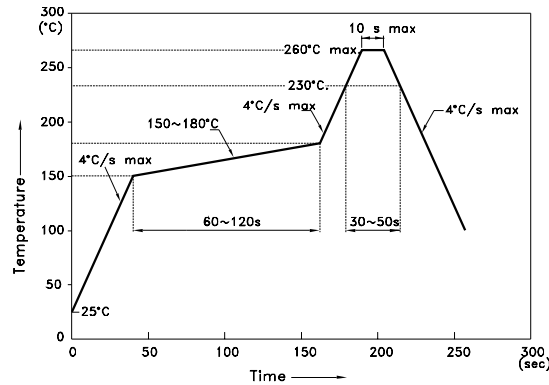


Green



APBDA3020PBACGKC

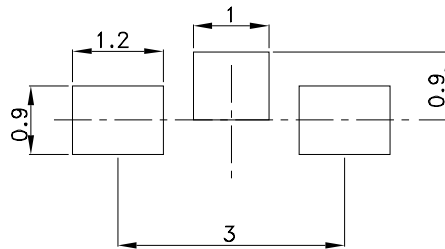
Reflow Soldering Profile For Lead-free SMT Process.



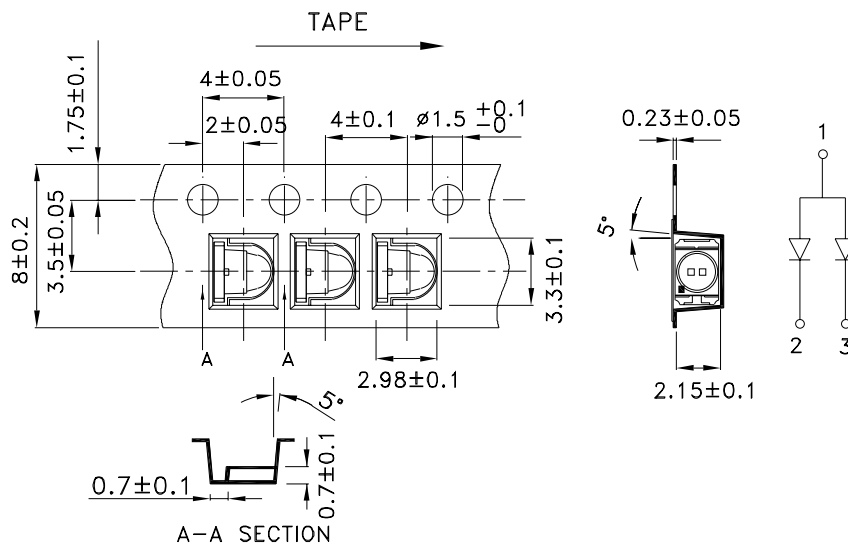
NOTES:

1. We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)

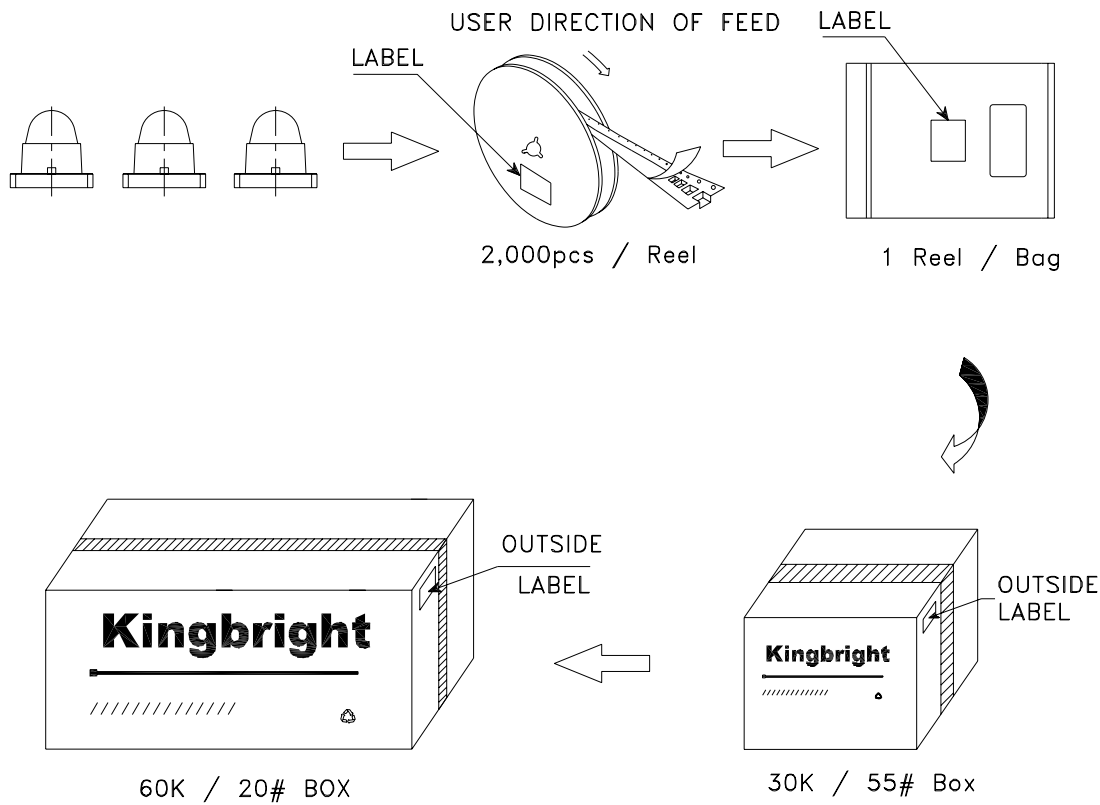


Tape Specifications (Units : mm)



PACKING & LABEL SPECIFICATIONS

APBDA3020PBACGKC



Kingbright	
P/NO: APBDA3020xxx	
QTY: 2,000 pcs	Q.C. Q C xx xx xxxx PASSED
S/N: XXXX	
CODE: XXX	
LOT NO:	
 XXXXXXXXXXXXXXXXXXXX	
RoHS Compliant	